

## Compact Radio Sources in NGC 660

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The nuclei of starburst galaxies are often obscured by dust and hence are probed best in non-visual wavelength regimes such as the infrared and radio. For example, radio studies of classical starburst galaxies such as NGC 253 and M82 have identified  $\sim 50$  compact sources in each galaxy. One of the purposes of this type of observing program has been to classify the compact radio sources as H II regions or radio supernovae, and to estimate the supernova rates. If obtainable, spectral indices are used to identify the compact structures; otherwise supporting evidence or assumptions are needed.

NGC 660, located at a distance of 7.5 Mpc, is a strong candidate for a search for compact radio sources. It is a relatively strong infrared emitter, has far infrared colors similar to NGC 253 and M82, and shows several peaks in published Very Large Array (VLA) maps at 6 cm and 20 cm. We therefore observed NGC 660 at 3.6 cm in the A-configuration of the VLA on 1995 July 13--14. Total integration time on-source was 4.8 hrs. The image shows a large family ( $\sim 20$ ) of compact radio structures with a flux density range of 0.1--3.4 mJy, three of which have fluxes  $>2.0$  mJy. The source luminosities are comparable to those of the stronger sources in M82 and NGC 253, typically a few times more powerful than Cas A. A number of the compact sources appear to lie along a ring projected against the more diffuse radio emission in the galaxy's nuclear region.

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